

Claim Rejections under 35 USC §102

The Office Action dated 04/06/05 indicates that claims 1, 3-6, 9, 16 and 20 are rejected under 35 USC §102(b) as being anticipated by Speranza et al (5,001,267), for reasons outlined on page 2 of the Office Action, specifically citing column 4, lines 38-54 of the Speranza reference. Applicants understand that according to MPEP 8th ed. ; §706.02 pp 700-21, col. 1, under the heading: DISTINCTION BETWEEN 35 U.S.C 102 AND 103 , that for anticipation under 35 USC 102 to be proper, "*the reference must teach every aspect of the claimed invention*".

In the present instance, the Speranza reference does not teach Applicants' recited claim limitation that the amount of secondary amine produced during the process is less than 3.00 % by weight of the total amount of secondary amount produced. This 3.00 % value is a specifically-recited limitation in all of Applicants' pending claims.

Accordingly, Applicants respectfully requests reconsideration and withdrawal of the rejection of claims 1, 3-6, 9, 16 and 20 under 35 USC §102(b) stated in the Office Action dated 04/06/05, because every feature of Applicant's invention is not taught in the Speranza reference (US 5,001,267).

Claim Rejections under 35 USC §103

The 4/06/05 Office Action has indicated that claims 2, 7-8, 10-15, 17-19 are rejected under 35 USC 103(a) as being unpatentable over the Speranza et al. reference (US 5,001,267), in combination with Tahara et al. (US 4,373,107), further in view of Oude Alink et al (US 3,994,975) and Speranza et al. (US 3,110,732) stating that:

"It would have been obvious to one of ordinary skill in the art at the time the invention was made to have looked to the teachings of Speranza et al., Tahara et al., and

Oude Alink et al. for a reaction that involves a carbonyl compound with an amine compound in the presence of hydrogen and palladium catalyst. One of ordinary skill in the art would have been motivated to do so because Speranza et al., Tahara et al., and Oude Alink et al. are all directed to the preparation of secondary amine by reacting a primary amine with a carbonyl compound in the presence of palladium catalyst."

With regards to the making a *prima facie* case of obviousness under 35 USC §103(a), Applicants note that MPEP section 706.02(j) sets forth the three basic criteria which must be met:

- "1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
- 2) there must be reasonable expectation of success; and
- 3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based upon applicant's disclosure."

Although the Office Action purports to reject claims 2, 7-8, 10-15, 17-19 under 35 USC § 103(a) as being unpatentable over the references cited above, the Office Action of 4/06/05 has neglected to fully appreciate the differences between the prior art and Applicants' claimed invention.

In Applicants' claimed invention, the Office Action has pointed out some true differences between Applicants invention and the prior art. However, the Office Action has overlooked the key factor that Applicants' claimed processes produce less than 3.00 % tertiary amine along with the secondary amine product. This is mentioned in the last paragraph of page 4 of Applicants specification, the Examples, and recited as a limitation in Applicants' claims.

Nothing in the prior art of record teaches or even remotely suggests that it could be possible to produce a secondary amine product which has less than 3.00 % of tertiary amine

present.

US Patent 5,001,267 provides an N-isopropyl amine derivative of ethylene diamine. This derivative is a mixture of N-isopropyl ethylenediamine, comprising (mono-primary and mono-secondary amine) and N, N'-diisopropyl ethylene diamine (di-secondary amine). The mixture is then subjected to fractional distillation to have the pure N-isopropyl ethylenediamine (claim 3, preferentially preparing the N-secondary monoisopropyl derivative of...). Thus, the prior art does not teach or even suggest the possibility of producing pure secondary amine as taught in Applicants' instant disclosure.

Since the limitation of "less than 3.00 %" is neither taught nor suggested in any of the prior art of record, and since it is not inherent in the prior art, it cannot be stated that motivation to arrive at this invention exists. Thus, all of Applicants' claim limitations are not met, and the rejection of claims 2, 7-8, 10-15, 17-19 under 35 USC § 103 should be re-considered and withdrawn.

For the foregoing reasons, Applicants respectfully submit that all of the pending claims in this application are now in condition for allowance.

Thank you for your considerations.

Respectfully submitted,



Christopher J. Whewell, Reg. 37,469
c/o Huntsman
7114 North Lamar blvd.
Austin, Texas 78752
(512) 483-0919